

MAJOR REGULATIONS STANDARDIZED REGULATORY IMPACT ASSESSMENT SUMMARY

DF-131 (NEW 11/13)

STANDARDIZED REGULATORY IMPACT ASSESSMENT SUMMARY

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- Statement of the need for the proposed major regulation.

Mobile sources are the greatest contributor to emissions of criteria pollutants and greenhouse gases (GHG) in California. Zero-emission vehicles (ZEVs) have no tailpipe emissions and help protect public health, reduce petroleum use, meet sustainability objectives, and reduce direct exposure to diesel emissions in local communities. The proposed Advanced Clean Trucks (ACT) regulation aims to accelerate adoption of medium and heavy duty ZEVs with a gross vehicle weight rating greater than 8,500 lbs. as part of California's strategy to reduce emissions from transportation.

The proposed manufacturer ZEV sales requirement will meet several objectives and recommendations of Sustainable Freight Action Plan, Mobile Source Strategy and ZEV Action Plan. It will complement the recently approved airport shuttle bus regulation and the zero-emission truck purchase requirement in AB 769 for state government fleets. It also complements the federally and California-adopted Phase 2 GHG regulation. Finally, it establishes a foundation for meeting executive orders, plans, and directives issued by the Governor.
- The categories of individuals and business enterprises who will be impacted by the proposed major regulation and the amount of the economic impact on each such category.

The directly affected businesses under the proposed regulation are truck manufacturers. As the affected truck manufacturers are located outside of California, it is conservatively assumed for this analysis that the vehicle costs will be passed on to end-users in the Truck Transportation (NAICS 484) and state and local government, who will also incur infrastructure costs, and realize fuel and operational savings. Direct costs are estimated to be -\$4.8 billion for the truck transportation industry and in -\$140 million for local governments and -\$101 million for state government.
- Description of all costs and all benefits due to the proposed regulatory change (calculated on an annual basis from estimated date of filing with the Secretary of State through 12 months after the estimated date the proposed major regulation will be fully implemented as estimated by the agency).

Costs: The Proposed ACT Regulation will increase the number of ZEVs sold in California relative to the baseline. These ZEVs have higher upfront capital costs for the vehicle and infrastructure investments, but lower operating costs over time resulting in lower overall costs for truck transportation in California. The total cost to truck transportation in California assuming all vehicle manufacturer costs and 10 percent of the Phase 2 GHG cost-savings are passed on is -\$4.8 billion between 2020 and 2040, with annual costs ranging from -\$794 million to \$60 million during this time period. Of this amount, \$2.16 billion of cost-savings result from tax and fee reductions, which are a negative fiscal impact to state and local government.

Benefits: By increasing the number of ZEVs sold in California, this regulation is estimated to decrease emissions of criteria pollutants and greenhouse gases (GHG). The decrease in criteria pollutant emissions is estimated to reduce adverse health outcomes in California, which are valued at \$5.54 billion from 2020-2040. Additionally, the decrease in GHG emissions generate a global benefit through the avoided Social Cost of CO₂, which ranges in total value from \$240 million to \$1.0 billion from 2020-2040.
- Description of the 12-month period in which the agency estimates the economic impact of the proposed major regulation will exceed \$50 million.

The proposed regulation has the first requirements starting in 2020 and is fully implemented by 2030. The proposed regulation is a major regulation requiring a Standardized Regulatory Impact Assessment (SRIA) because the estimated annual economic impact will exceed \$50 million from 2024 through 2030 and beyond.

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5. Description of the agency's baseline:

The economic and emissions impacts of the Proposed ACT Regulation are evaluated against the business-as-usual (baseline) scenario each year for the analysis period from 2020 to 2040. The baseline vehicle inventory includes the same vehicle sales and population growth assumptions reflected in CARB's EMFAC emissions inventory for weight Class 2B and larger vehicles for all fuel types. EMFAC emissions inventory includes assumptions reflecting Phase 2 GHG, and LCFS program compliance.

ZEVs required by the Proposed ACT Regulation can also be used to comply with the CA Phase 2 GHG regulation and the U.S. EPA Phase 2 GHG regulation, and results in potential overlapping emissions and costs. To account for this, staff assumes no new GHG emissions benefits as a result of the Proposed ACT Regulation up to the total benefits anticipated from the CA Phase 2 GHG requirements. The interactions between CA Phase 2 GHG and the Proposed ACT Regulation are also factored into the cost analysis as described in the SRIA.

6. For each alternative that the agency considered (including those provided by the public or another governmental agency), please describe:

- a. All costs and all benefits of the alternative
- b. The reason for rejecting alternative

Alternative 1: Less stringent ZEV sales requirement

a. Alternative 1 would result in -\$1.3 billion in total costs to businesses from 2020 to 2040, which is \$3.5 billion less cost-savings than the proposed regulation. Alternative 1 would reduce emission less than the proposal, resulting in public health benefits valued at \$1.49 billion from 2020 to 2040, which is \$4.05 billion less than the proposed regulation.

b. Alternative 1 is rejected because it fails to maximize the number of ZEVs deployed, does not maximize NOx, PM2.5, and GHG reductions, and does not adequately foster ZEV market development in California.

Alternative 2: More stringent ZEV sales requirement

a. Alternative 2 would result in -\$4.5 billion in total costs to businesses from 2020 to 2040, which is \$0.3 billion less cost-savings than the proposed regulation. Alternative 2 would reduce emission more than the proposal, resulting in public health benefits valued at \$8.68 billion from 2020 to 2040, which is \$3.14 billion more than the proposed regulation.

b. Alternative 2 is rejected as the more aggressive timeframe raises questions about feasibility for manufacturers to comply with its requirements.

7. A description of the methods by which the agency sought public input. (Please include documentation of that public outreach).

For the Proposed ACT Regulation, CARB created a technical workgroup that comprises interested stakeholders including manufacturers, fleets, environmental groups, utilities, technology providers, and fuel providers. In addition to public workgroup meetings, CARB staff has conducted more than 100 individual meetings with more than 50 stakeholders. Since 2016, CARB staff held six workshops, and five workgroup meetings to provide information to the public and solicit feedback. Staff has reached out to the proposed regulated parties throughout the regulatory development. In the April 2017 workshop, staff asked fleets to submit answers to a draft fleet survey questionnaire in an effort to gather detailed information about everyday operations of local fleets. Staff also mailed notice letters to the 11,000 large entities and fleets that would be required to report under the Proposed ACT Regulation. Staff has produced two discussion documents that were made available to the public for comment on the ACT website; Total Cost of Ownership (TCO) and Energy Efficiency Ratio (EER) papers. Staff also posted the TCO calculator on the website allowing stakeholders to calculate and compare the TCO between vehicles.

8. A description of the economic impact method and approach (including the underlying assumptions the agency used and the rationale and basis for those assumptions).

The economic impact is estimated using the REMI PI+ model based on the estimates of direct costs and benefits described above. The change in costs estimated for the truck transportation (484) and state and local government is input as a change in production costs for that industry and a change in government spending, respectively. These changes in production costs realized by truck transportation for vehicles, fuel, maintenance, infrastructure, and other items will result in corresponding changes in demand for industries supplying those goods and services, which is input in the REMI model as an increase in final demand. The portion of the public health benefits which are monetized based on cost-of-illness (COI) methods, are input into the REMI model as a reduction in consumer spending on hospitals, with a corresponding increase in spending on other goods and services and savings. The years of analysis are 2020 through 2040; these years are used to simulate the proposed regulation through more than 12 months post full implementation.

Agency Signature

Date

8/8/2019

Agency Head (Printed)

Richard Corey